



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,830	08/29/2003	Hisashi Tsubata	Q77026	8024
23373	7590	11/24/2004		
SUGHRUE MION, PLLC			EXAMINER	
2100 PENNSYLVANIA AVENUE, N.W.			UHLIR, NIKOLAS J	
SUITE 800				
WASHINGTON, DC 20037			ART UNIT	PAPER NUMBER
			1773	

DATE MAILED: 11/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/650,830	TSUBATA ET AL.
	Examiner Nikolas J. Uhlir	Art Unit 1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 02 September 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 13-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 13-16 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 08/29/2003.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

1. This office action is in response to the amendment/arguments dated 09/02/2004. Applicant's amendment and arguments are not sufficient to overcome the art of record, and do not place the applicant in condition for allowance in view of the new grounds of rejection presented below.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagao et al. (JP publication #2000-331341) as evidenced by Schwarz (US5229895).

4. For the purpose of this examination the examiner has relied on a machine translation of JP2000-331341 to provide the basis for this rejection. A copy of this translation and the original Japanese was enclosed with the office action dated 6/2/04. All references in this office action refer to the machine translation unless otherwise expressly noted.

5. Nagao anticipates all of the limitations of claims 13-14. Specifically, Nagao teaches a method for forming a magnetic master medium. This method includes providing a substrate; coating a photoresist on the substrate; exposing the photoresist. Etching a pattern of pits in the photoresist, whereby the pits extend into the substrate; coating the resultant patterned substrate with a magnetic material, thereby filling the pits in the substrate and coating the protuberances formed by remaining photoresist with magnetic material (see figure 4a-4e and

section 22). At this point, the examiner takes the position that the master medium is formed. Nagao then teaches that surface of the master medium is ground to remove the remaining burrs of magnetic material coated photoresist (see sections 20-22, specifically lines 1-8 of section 22). As can be seen from figure 4, the resultant master medium contains a pattern of magnetic material. Though Nagao does not teach that this is an "uneven" pattern, as required by the instant claims, the pattern of magnetic material is used to transfer a preformat pattern to a slave disc (section 40). A preformat is also known in the art as a servo-tracking pattern, as evidenced by Schwarz et al. (column 1, lines 39-40). One purpose of a servo-tracking pattern is to enable a magnetic head floating above a magnetic medium to detect its location relative to other parts of the disc. Thus, if a servo-tracking pattern were uniform, the magnetic head would be unable to tell the difference between one portion of the media and another portion. Thus a servo track cannot be an even pattern. Thus, as a preformat pattern is equivalent to a servo-tracking pattern, and a servo-tracking pattern cannot be even and still perform its function, it is the examiners position that the preformat pattern taught by Nagao is an uneven pattern.

6. Regarding the limitations of claim 14, Nagao teaches that the grinding step is performed to remove burrs from the surface of the master. This reads on the applicant's claimed "ground according to the degree to which said surface is marred."

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashi et al. (WO00/65579) in view of Nagao.

9. For the purpose of this examination, the examiner has relied upon US6665133 as an English translation of the cited Nagao reference. All references herein refer to the US document.

10. Hashi teaches a magnetic master medium formed by forming a resist film on a surface of a substrate; patterning the resist film by exposing and developing it with a light source; forming a pattern of ridges and recesses by etching; forming a magnetic layer over the surface of the patterned substrate; and lifting off the resist by the lift off method (column 13, lines 10-25). The resulting master has an uneven pattern of magnetic material on its surface, as shown by figure 15.

11. Hashi fails to teach grinding the master medium at least once prior to the use of the master for transferring data to a slave medium, as required by claim 14.

12. However, the method utilized by Hashi is substantially the same as the method utilized to by Nagao. As Shown by Nagao, formation of a master medium by depositing a magnetic layer over a patterned photoresist covered substrate results in the formation of burrs (section 22). Indeed, portions of the magnetic

layer of Hashi extend beyond the protuberance portion of the substrate (see Hashi figure 16). According to Nagao, these burrs should be ground away to flatten the surface of the master (section 22). The flat surface improves the magnetic transfer from the master to the slave and also avoids durability issues present in masters utilizing magnetic protrusions thereby increasing its durability (section 12).

13. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to grain the protruding magnetic portions of the magnetic master taught by Hashi (as shown in figure 16) such that a master medium with a flat surface is formed prior to the use of the master to transfer information to a slave medium.

14. One would have been motivated to make this modification in view of the fact that Hashi and Nagao utilize similar processes to form the magnetic master; the fact that the Hashi master exhibits a problem recognized by the Nagao reference (namely burrs/protuberances resulting in a master having an uneven surface); and in view of the fact that Nagao teaches that the transfer characteristics and the durability of a master is improved by grinding these burrs down such that the magnetic portion of the master and the protuberance portion of the substrate of the master are in the same plane.

15. Bearing the above in mind, Hashi further teaches that after the master is repeatedly used to transfer information to slave media, burrs/defects form on the surface of the master (column3, line 15-column 4, line 25). To ensure that accurate magnetic transfer takes place, Hashi periodically brings the magnetic

master into contact with a dummy disc to remove particles from the surface of the master (column 8, lines 5-37). In addition, Hashi teaches that a varnishing process, using a tape, a head, buffing abrasives, and polishing or grinding powder may be used (column 11, lines 40-48).

16. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to polish or grind the surface of the master medium of Hashi as modified by Nagao so as to remove burrs and other defects from the surface of the master medium of Hashi after the master medium has been used to transfer information to a slave medium.

17. One would have been motivated to make this modification in view of the fact that Hashi expressly teaches that a varnishing process using polishing or grinding powder can be used to treat the surface of a master medium after it has been utilized to transfer information to a slave medium.

18. Claim 16 is met as set forth above.

Response to Arguments

19. Applicant's arguments filed 09/02/2004 have been fully considered but they are not persuasive. The applicant's sole argument is that Nagao does not teach grinding the master medium after it has been made but before it has been used to transfer information to a slave medium. The above rejection clarifies the examiners position with regards to when the examiner considers the master medium of Nagao to be formed, and renders this argument unpersuasive.

Conclusion

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

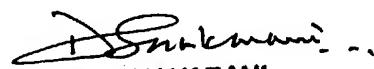
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikolas J. Uhlir whose telephone number is 571-272-1517. The examiner can normally be reached on Mon-Fri 7:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nju
Nju


D. S. NAKARANI
PRIMARY EXAMINER